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NUTRITIONAL, PHYSICOCHEMICAL, SENSORIAL PROPERTIES AND SHELF LIFE OF CRACKERS BASED ON CLADODE FLOUR OF *OPUNTIA FICUS INDICA*

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Sustainable food can help to prosper the local economy and improve the health of consumers. Indeed, consumers require new foods rich in nutrients, with acceptable organoleptic quality. Cladode of *Opuntia ficus indica* is one of plants containing several bioactive compounds that have proven their importance in the prevention and cure of many chronic diseases that is why cladode flour is currently used in pharmacological and food industry. Our study shows that crackers based on cladode flour of *Opuntia ficus indica* present an interesting source of major and secondary nutrients and trace elements essential to the growth and development of the human body (certain elements far beyond the daily needs recommended by WHO). And it presents a high amount of bioactive compounds (Polyphenols, flavonoids) with a considerable antioxidant capacity. Functional, physicochemical and sensorial properties were studied. The result showed that the flour of cladode has a great technological potentiality. The Proximate composition of crackers shows a variation according to the content of cladode flour. Crackers hardness and L* and a* color values were also analyzed. The overall acceptability showed that 25 % can be a maximum level incorporation to prepare an acceptable diet cracker with score of 6,13. The water activity of crackers maintains constant in the standard of the baked products (Aw = 0.4 to 0.6) while the addition level of cladode flour increase. This work demonstrates the nutritional potential benefit, allowing the possibilities of using cladode as a power source for humans with a remarkable therapeutic effect.

BIOGRAPHY

Bouchra Nabil, a PhD student is currently studying at Semelia Science Faculty, University Cadi Ayyad. She got her Masters on Food Technology from the University Cadi Ayyad in 2014. Her thesis is a part of scholarly project named Priority Research Program (PPR-B-Mahrouz-FS-UCA- Marrakesh).

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